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Ms G Giles
Headteacher
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Dear Ms Giles

Ofsted 2010–11 subject survey inspection programme: Science

Thank you for your hospitality and cooperation, and that of your staff, during my visit on 28 and 29 September 2010 to look at work in science.

The visit provided valuable information which will contribute to our national evaluation and reporting. Published reports are likely to list the names of the contributing institutions but individual institutions will not be identified in the main text without their consent.

The evidence used to inform the judgements included: interviews with staff and learners, scrutiny of relevant documentation, analysis of students' work and observation of seven lessons.

The overall effectiveness of science is satisfactory.

Achievement in science

Achievement in science is satisfactory.

- Attainment at Key Stage 4 rose significantly in 2010 although students' attainment at the end of Year 11 remains below the national average.
- Students' progress at all key stages is satisfactory relative to their starting points. Increased rates of students' progress and rising attainment at Key Stage 3 and 4 reflect higher expectations of what students can achieve, more thorough tracking of their progress and the recent improvements to the curriculum.
- In lessons, the vast majority of students work productively in groups or individually and enjoy being active participants in the learning. Most can explain their scientific understanding well, for example, in a Year 11 lesson

students confidently used their prior knowledge to predict the outcomes of an investigation.

- Students can also identify potential sources of error when carrying out investigative work but they are less confident in identifying how the accuracy or reliability of their results could be improved.
- In a small minority of lessons teaching does not always bring out these positive learning qualities in students and they become passive or distracted, and progress slows.

Quality of teaching and learning of science

The quality of teaching of science is satisfactory.

- There is a good balance of subject specialists across the department and teachers' individual strengths are well deployed.
- Most teachers are making effective use of assessment data to match work to the needs of different learners. For example, lesson objectives describing learning at different levels or grades are shared with students so that they are aware of what they are expected to achieve.
- Features typifying good teaching include brisk pace through a well-structured series of activities that support the intended learning effectively. Good teaching also provides an appropriate degree of challenge and regular opportunities for students to develop their independent learning skills. However, too much teaching is not of this good quality and learners do not always make the progress that they should.
- The contribution of assessment to promoting students' learning is variable. For example, some but not all students receive clear written feedback on how well they are doing and guidance on what they need to do to improve. Similarly, opportunities for students to be involved in assessing their own work are more frequently taken at Key Stages 3 and 5.
- The use of information and communication technology to enhance teaching and learning is limited by available resources. However, laptops within the science department allow students to extend their knowledge and understanding of science through internet research activities or use presentation software to communicate their learning.
- The use of the virtual learning environment to support students' study beyond the classroom is at the early stages of development.

Quality of the curriculum

The quality of the science curriculum is satisfactory.

- At Key Stage 3, schemes of work have been developed to ensure students gain confidence in the skills of scientific enquiry and that scientific

concepts are delivered through relevant and engaging contexts. For example, students are able to explore the moral and ethical issues related to science through involvement in a debate focusing on organ donation.

- Recent developments of the curriculum at Key Stage 4 have ensured that all students now receive their entitlement to a broad and balanced science curriculum.
- The introduction of a BTEC science course has made a significant contribution to raising standards in science. Current Year 10 students have the opportunity to study a BTEC course at Diploma, Extended Certificate or First Certificate level and this is ensuring that the curriculum is meeting students' different learning needs more effectively. However, for some courses, including the increasingly popular triple science, curriculum time is limited.
- In the sixth form, Level 3 courses are only available in biology, chemistry and physics and there is currently no clear post-16 progression route for students who study a BTEC science course at Key Stage 4.
- The college's arts specialism is providing interesting opportunities for cross-curricular learning and promoting more creative approaches to science teaching. However, enrichment of the science curriculum and extra-curricular opportunities in science overall are limited.

Leadership and management of the subject

Leadership and management of science are good.

- Over the last two years, curriculum developments, challenging student targets, robust tracking of students' progress and effective intervention to help those at risk of underachievement get back on track have successfully raised standards and ensured that achievement in science has improved.
- There is a sharp focus on evaluating the performance of different groups of learners and this is helping to ensure all students make better progress.
- The science subject leader has a very detailed understanding of the current strengths and areas for development within the department and has a clear vision for moving provision forward to ensure all students make good progress.
- Good attention has been paid to the professional development of staff within the science department ensuring that both their generic teaching and subject-specific skills are enhanced.
- Termly reviews, led by school leaders, of students' progress and the evaluation of the departments' contribution to whole-school improvement priorities provide a good balance of support and challenge for the subject leader.

Areas for improvement, which we discussed, include:

- ensuring that all teaching enables students to make good progress
- using day-to-day assessment more effectively and consistently at all key stages to enhance students' learning
- extending the effective Key Stage 3 approach to designing schemes of work into Key Stage 4 and the sixth form
- ensuring that the science curriculum for the sixth form provides good progression opportunities for all students
- developing enrichment and extra-curricular opportunities to enhance students' learning in science.

I hope that these observations are useful as you continue to develop science in the school.

As I explained previously, a copy of this letter will be published on the Ofsted website. It may be used to inform decisions about any future inspection. Except in the case of academies, a copy of this letter is also being sent to your local authority.

Yours sincerely

Katrina Gueli
Her Majesty's Inspector